

What is claimed is:

1. A method for inhibiting interferon gamma (IFN γ) levels in a T cell or cell population, comprising:

5 contacting said T cell or cell population with an IL-21 agonist in an amount sufficient to inhibit IFN γ in said T cell or cell population, wherein the agonist is an IL-21 polypeptide comprising an amino acid sequence at least 85% identical to SEQ ID NO: 2 and which is capable of binding to an IL-21R.

10 2. The method of claim 1, further comprising identifying a T cell or cell population in which inhibition of IFN γ levels is desired.

3. A method for promoting differentiation of a Th precursor (Thp) cell or cell population into a Th2 cell or cell population, comprising:

15 contacting said Thp cell or cell population with an IL-21 agonist in amount sufficient to induce differentiation of said Thp cell or cell population into a Th2 cell or cell population, wherein the agonist is an IL-21 polypeptide comprising an amino acid sequence at least 85% identical to SEQ ID NO: 2 and which is capable of binding to an IL-21R.

20 4. The method of claim 3, further comprising identifying a Thp cell or cell population in which differentiation into a Th2 cell or cell population is desired.

5. A method of inhibiting differentiation of a Thp cell or cell population into a Th1 cell or cell population, comprising:

25 contacting said Thp cell or cell population with an IL-21 agonist in an amount sufficient to inhibit differentiation of said Thp cell or cell population into a Th1 cell or cell population, wherein the agonist is an IL-21 polypeptide comprising an amino acid sequence at least 85% identical to SEQ ID NO: 2 and which is capable of binding to an IL-21R.

6. The method of claim 5, further comprising identifying a T cell population in which inhibition of differentiation of said Thp cell or cell population into a Th1 cell or cell population is desired.

5 7. The method of any of claim 1, 3 or 5, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO:2.

8. The method of any of claim 1, 3 or 5, wherein the contacting step is carried out ex vivo, in vitro, or in vivo.

10 9. The method of any of claim 1, 3 or 5, wherein the contacting step is carried out in a mammalian subject.

15 10. The method of claim 9, wherein the mammalian subject is a human.

11. A method for inhibiting differentiation of a Th precursor (Thp) cell or cell population into a Th2 cell or cell population, comprising:

contacting said Thp cell or population with an antagonist of an interleukin-21 (IL-21)/IL-21 receptor (IL-21R) in an amount sufficient to inhibit differentiation of said Thp cell or cell population into said Th2 cell population, wherein the antagonist is selected from the group consisting of an anti-IL21R antibody, an antigen-binding fragment of an anti-IL21R antibody and a soluble fragment of an IL-21R.

20 12. The method of claim 11, further comprising identifying a T cell or cell population in which an inhibition of differentiation of Thp cell or cell population into a Th2 cell or cell population is desired.

25 13. A method for increasing interferon gamma (IFN γ) levels in a T cell or cell population, comprising:

contacting said T cell or cell population with an antagonist of an IL-21/IL-21R in an amount sufficient to increase IFN γ levels in said T cell or cell population, wherein the antagonist is selected from the group consisting of an anti-IL21R antibody, an antigen-binding fragment of an anti-IL21R antibody and a soluble fragment of an IL-21R.

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14. The method of claim 13, further comprising identifying a T cell population in which an increase in IFN γ levels is desired.

10 15. The method of claim 11 or 13, wherein the soluble fragment of an IL-21R comprises an extracellular region of an IL-21 Receptor.

15 16. The method of claim 15, wherein the soluble fragment comprises an amino acid sequence at least 85% identical to amino acids 20 to 235 of SEQ ID NO: 4 and which is capable of binding IL-21.

17. The method of claim 15, wherein the soluble fragment comprises amino acids 1 to 235 of SEQ ID NO:4.

20 18. The method of claim 15, wherein the soluble fragment further comprises an Fc fragment.

19. The method of claim 11 or 13, wherein the antagonist is an anti-IL21R antibody or an antigen-binding fragment thereof.

25 20. The method of claim 12, wherein the T cell population comprises at least one Th1 cell.

30 21. The method of claim 11 or 13, wherein the contacting step is carried out ex vivo, in vitro or in vivo.

22. The method of claim 21, wherein contacting step is carried out in a mammalian subject.

23. The method of claim 22, wherein the mammalian subject is a human.